

Amendments to the Specification

Please replace paragraph [0001] with the following amended paragraph:

[0001] This application claims priority to provisional application number 60/503,092 ~~[[TBD]]~~ filed on September 14, 2003 ~~[[TBD]]~~ by Shao, et al., entitled *An Apparatus and Associated Methods to Implement a High-Throughput Wireless Communication System*, the disclosure of which is expressly incorporated herein for all purposes.

Please replace paragraph [0041] with the following amended paragraph:

[0041] According to one example embodiment, diversity agent 212 may ensure that adjacent coded bits are mapped onto nonadjacent subcarriers to perform the tone interleaving. According to one embodiment, the interleaver depth determines how many tones separate adjacent coded bits. In general, this separation should be equal to the coherence bandwidth of the channel, e.g., $\frac{N}{L_R}$ ~~[[N/L]]~~ (where N =DFT size, and ~~[[L]]~~ L_R =the length of the channel response in time), although the invention is not limited in this respect. In this regard, the interleaver depth is proportional to the length of the channel impulse in time ~~[[L]]~~ (L_R) .